

Contributions to the Bryological Flora of Eastern Asia (VI)

By

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堀川芳雄：東亞産蘚苔植物報告（其六）

67) **Metzgeria pubescens** (SCHRANK) RADDI in Att. Soc. Sci. Mod. XVIII (1818) p. 46.

Jungermannia pubescens SCHRANK, Prim. Fl. Salisb. (1792) p. 231.

Chinomitrium pubescens HÜBENER, Hep. germ. (1834) p. 48.

Nom. Jap. *Ke-hutamatagoke*.

Hab. On the shaded moist rocks.

Manchuria : Wei-Hu-Ling, prov. Kirin (Y. HORIKAWA, July 23, 1935).

Distr. Europe, Caucasus, Himalaya, China, Formosa, Yakusima, Quelpaert, Korea, Japan Proper, Hokkaidô, Saghalien, North America.

This species is a new addition to the flora of Manchuria.

68) **Zoopsis liukuensis** HORIKAWA in Jour. Sci. Hiroshima Univ. ser. B, div. 2, I (1931) p. 65.

Nom. Jap. *Mizinko-goke*.

Hab. On the decaying logs.

Kyusyu : Huruta-kwanyurin, ins. Tanegasima (Y. HORIKAWA, Apr. 10, 1937).

Distr. Formosa, Ryukyu (ins. Okinawa et Iriomote).

This interesting species is a new addition to the flora of Japan Proper.

69) **Trichocolea tomentella** (EHRHART) DUMORTIER, Comm. Bot. (1882) p. 113.

Jungermannia tomentella EHRHART in OPIZ, Beitr. zur Naturgesch. II (1785) p. 150.

Trichocolea Biddlecomeae AUSTIN in Bot. Gaz. III (1878) p. 6.

Nom. Jap. *Birôdo-urokogoke*, *Awoziro-mukumukugoke*.

Hab. On wetty soil.

Hokkaidô : Nopporo-kokuyurin, prov. Isikari (Y. HORIKAWA, July 31, 1937).

Distr. Europe, China, Formosa, Ryukyu, Yakusima, Japan Proper, North America.

The present species is new to the flora of Hokkaidô.

70) ***Pynolejeunea subalpina*** HORIKAWA, sp. nov. (Figs. 13, 14).

Dioica. Planta minuta, rigidula, pallida vel flavescens, ad 6 mm longa, cum

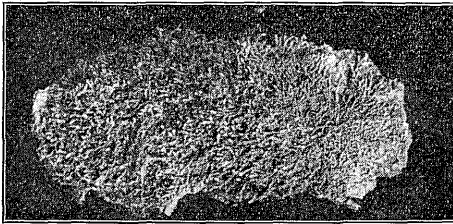


Fig. 13. *Pynolejeunea subalpina* HORIKAWA, growing on the bark of *Abies Mariesi*, in nat. size. あをもりとどまつノ樹皮面=着生スル *Pynolejeunea subalpina* HORIKAWA ノ群落。

foliis 0.65 mm lata, in cortice dense caespitans. Caulis ca. 0.11 mm in diametro, prostratus, substrato appressus, irregulariter multiramosus; rhizoidium fascicularis expansis. Folia caulina laxe imbricata vel approximata, oblique patula, concava, in plano late ovata, subsymmetrica, ca. 0.3 mm longa, medio 0.24 mm lata,

apice rotundata, brevissima basi inserta, margine supero pilo 1-6 longissime armato. Cellulæ lobi hyalinæ, apicales diametro ca. 17μ , medio 19-22 μ , basales $15 \times 22\mu$, trigonis parvis in medio et angulis parietum. Lobulus maximus, folio subæquilatus et parum brevior, late ovata, ca. 0.25 mm longus, 0.2 mm latus, carina valde arcuata, apice quam basis multo latiore, late emarginato, bidentato, dente angulari apiculato, altero (mediano) dente subapicali æquimagno, striete in folium excurrans. Amphigastria caulina magna, contigua, caule 2-plo latiora, transverse inserta, reniformia, 0.23 mm longa et lata, ad 1/3 biloba, sinu obtuso amplissimo, lobis rotundatis vel obtusis. Perianthia geminatim innovata, pyriformia, apice rotundata, ca. 1 mm longa, 0.7 mm lata, rostro subnullo, superne triplicata, plieis posticis breviter decurrentibus lateque divergentibus. Folia floralia perianthio duplo breviora, ad 1/2 biloba, lobis triangulatis acutissimis. Amphigastrium florale foliis floralibus subæquilongum, ad medium bifidum, lobis cuspidatis.

Hab. On the barks of trees and shrubs of subalpine regions.

Honsyu : Mt. Hakkôda, prov. Mutu (Y. HORIKAWA, Aug. 8, 9-typus, 10, 1930);

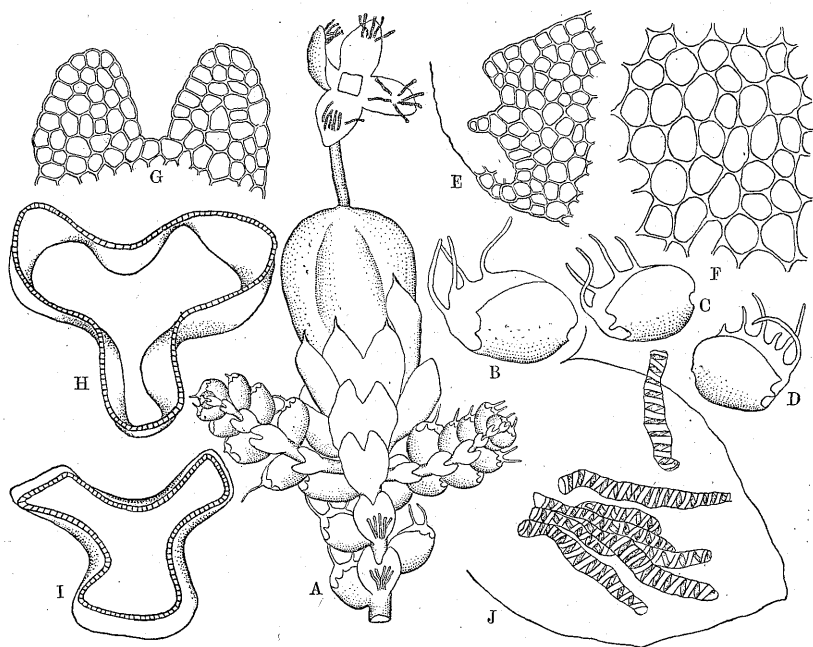


Fig. 14. *Pycnolejeunea subalpina* HORIKAWA. A. Part of plant with splitting capsule (postical view), \times ca. 30. B, C, D. Stem-leaves, \times ca. 45. E. Apex of lobule, \times ca. 120. F. Cells from middle of leaf, \times ca. 250. G. Upper half of underleaf, \times ca. 120. H, I. Cross-section of perianth, \times ca. 60. J. Capsule-valve with adhering elaters, \times ca. 120.

A. 裂開セル蒴胞ヲ着ケタ植物體ノ一部、腹面觀 \times 30. B, C, D. 莖葉 \times 45. E. 葉ノ下片ノ先端 \times 120. F. 葉ノ中央部位ノ細胞 \times 250. G. 腹面葉ノ上半部 \times 120. H, I. 花被ノ横斷面 \times 60. J. 附着性ノ彈絲ヲツケタ蒴胞ノ裂片 \times 120.

ibidem (Y. HORIKAWA, July 23, 24, 1932); ibidem (Y. HORIKAWA, Aug. 5, 1937); Mt. Iidesan, prov. Uzen (Y. HORIKAWA, July 15, 1931); Mt. Hiuti, prov. Aizu (Y. HORIKAWA, Aug. 14, 1933); Mt. Kuroiwayama, prov. Iwasiro (Y. HORIKAWA, July 17, 1936); Mt. Yatugatake, prov. Sinano (Y. HORIKAWA, July 9, 1932); Mt. Misen, prov. Yamato (S. IWAMASA, Aug. 4, 1935).

Sikoku: Mt. Isizuti, prov. Iyo (Y. HORIKAWA, Apr. 13, 1931).

Hokkaidô: Mt. Daisetu, prov. Isikari (Y. HORIKAWA, July 21, 24, 1937).

Saghalien: Mt. Tosso, prov. Motodomari (Y. HORIKAWA, July 23, 1931); Ho-e,

prov. Siska (Y. HORIKAWA, July 27, 1931).

71) **Encalypta ciliata** (HEDWIG) HOFFMANN, Deutschl. Fl. II. (1795) p. 27.

Leersia ciliata HEDWIG, Deser. I (1787) p. 49.

Bryum ciliare GMELIN, Syst. nat. II (1791) p. 1332.

Leersia fimbriata BRIDEL, Musc. rec. II. 1 (1798) p. 53.

Encalypta laciniata LINDBERG in Acta Soc. Sci. Fenn. X (1871) p. 18.

Encalypta elongata FUNCK in BRIDEL Bryol. univ. I (1826) p. 787.

Nom. Jap. *Yarikatugi*.

Hab. On soil among the rocks.

Hokkaidô : Mt. Yûbari, prov. Isikari (Y. HORIKAWA, Aug. 6, 1938); Mt. Dai-setu, prov. Isikari (Y. HORIKAWA, July 24, 1937).

Kuriles : Syakotan, ins. Sikotan (Y. HORIKAWA, Aug. 9, 1938).

Distr. Europe, Algeria, Abyssinia, Caucasus, Kashmir, Himalaya, Central Asia, Siberia, Amur, Manchuria, Korea, Formosa, Japan Proper (Honsyu), North America.

The species is a new addition to the flora of Hokkaidô and the Kuriles.

72) **Aulacomnium palustre** (LINNÆUS) SCHWÆGRICHEN, Suppl. III. P.

I. Fase. I. Mon. (1827) p. 4.

Mnium palustre LINNÆUS, Sp. pl. ed. I. II. (1753) p. 1110.

Bryum palustre NECKER, Meth. M. (1771) 210.

Gymnocephalus palustris SCHWÆGRICHEN, Suppl. I. P. II. (1816) p. 87.

Gymnocephalus inordinatus BRIDEL, Sp. M. III. (1817) p. 3.

Bryum inordinatum BRIDEL, Mant. M. (1819) p. 117.

Gymnocybe palustris FRIES, St. agr. femsj. (1825) p. 27.

Limnobryum palustre RABENHORST, Kryptfl. Tachs. I (1863) p. 502.

Sphærocephalus palustris LINDBERG, M. scand. (1879) p. 14.

Nom. Jap. *Ô-himogoke*.

Hab. On damp places and bogs.

Saghalien : Rosuke-sawa, prov. Ôtomari (Y. HORIKAWA, July 21, 1931) ; Ho-e, prov. Siska (Y. HORIKAWA, July 1931).

Distr. Europe, Spitzbergen, Algeria, Abyssinia, Caucasus, Central Asia,

North Asia, Amur, Kamtschatka, China (Yunnan, Setschwan), Japan Proper (Honsyu), Kuriles (ins. Urup), North America, East Australia, Tasmania.

This species is new to the flora of Saghalien.

73) **Aulacomnium turgidum** (WAHLENB.) SCHWÆGRICHEN, Suppl. P.I. Fasc. I. Mon. (1827) p. 7.

Mnium turgidum WAHLENB., Fl. lapp. (1812) p. 351.

Bryum turgidum SW., Summ. veg. scand. (1814) p. 41.

Gymnocybe turgida LINDBERG in Not. ur Saellsk. p. Faun. et Fl. Fenn. Færh. IX. (1867) p. 85.

Sphærocephalus turgidus LINDBERG, M. scand. (1879) p. 14.

Nom. Jap. *Huto-himogoke*.

Hab. Among other mosses in damp places.

Saghalien: Ho-e, prov. Siska (Y. HORIKAWA, July 1931).

Distr. Europe, Siberia, Japan Proper (Honsyu), Hokkaidô, Korea, North America.

The present species is a new addition to the flora of Saghalien.

74) **Bartramia norvegica** (GUNN.) LINDBERG in Öfv. Vet.-Akad. Færh. XX (1863) p. 389.

Bryum norvegicum GUNN., Flora norveg. II (1772) p. 138.

Bryum laterale LIGHTF., Fl. Scott. II (1777) p. 727.

Webera Halleriana HEDWIG, Fund. II (1782) p. 95.

Webera clandestinia HEDWIG, Fund. II (1782) p. 104.

Bryum recurvum WULF. in JACQ., Collect. II (1788) p. 224.

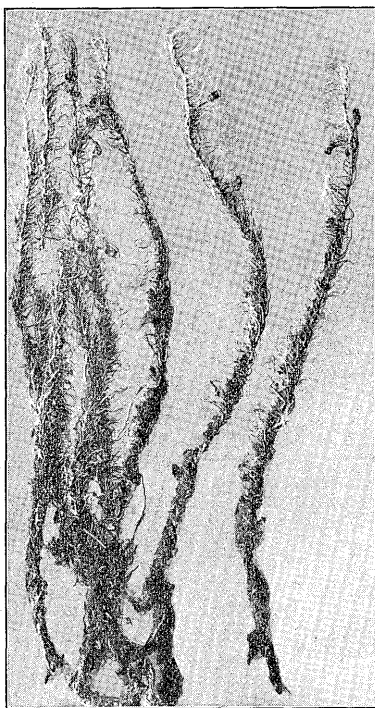


Fig. 15. *Bartramia norvegica* (GUNN.) LINDBERG, $\times 3/4$.

Bryum Bartramia GMEL., Syst. nat. II (1791) p. 1335.

Mnium laterale HOFFMANN, Deutschl. Fl. II (1796) p. 54.

Nom. Jap. *Seitaka-tamagoke*.

Hab. On damp shady forest-soil.

Distr. Europe, Caucasus, Himalaya, China (Yunnan, Setschwan).

Formosa: Mt. Morrison, prov. Tainan (Y. HORIKAWA, Aug. 20, 1932); Mt.

Tugitaka, prov. Taityu (K. MORI, Oct. 1936).

This species is new to the flora of Japanese Territory.



Fig. 16. *Hypnodendron formosicum* CARDOT (\times ca. 4/5.)

75) ***Hypnodendron formosicum*** CARDOT in Beih. Bot. Centralbl. XIX. 2 Abt. (1906) p. 147.

Nom. Jap. *Kidati-haigoke*.

Hab. On damp shady forest-soil.

Ryukyu: Mt. Gozadake, ins. Iriomote (Y. HORIKAWA, Apr. 7, 1934).

Distr. Formosa, Philippines.

This species is a new addition to the flora of the Ryukyus.

76) ***Ptilium crista-castrense*** (L.) DE NOTARIS, Epil. (1869) p. 101.

Hypnum crista-castrensis LINNÆUS, Sp. pl. (1753) p. 1125.

Stereodon crista-castrensis MITTEN in Jour. Linn. Soc. Bot. VIII (1865) p. 41.

Nom. Jap. *Datyôgoke*.

Hab. On the layer of humus in subalpine regions.

Hokkaidô: Sisyamonai-goryorin, ca. Sikotuko, prov. Iburi (T. YAMAGUTI, Aug. 26, 1936); Mt. Yûbari, prov. Isikari (Y. HORIKAWA, Aug. 6, 1938); Mt. Daisetû, prov. Isikari (Y. HORIKAWA, July 24, 1937); Mt. Syaridake, prov. Kitami (M. KURITA, Aug. 5, 1936).

Distr. Europe, Caucasus, Himalaya, Yunnan, Siberia, Amur, Korea, Quelpert, Japan Proper, Formosa, Saghalien, North America.

The present species is new to the flora of Hokkaidô.

77) ***Polytrichum*** (Sect. *Polytricha alpina*) ***yezoense*** HORIKAWA, sp. nov.
(Figs. 17, 18).

Dioicum; robustissimum, elatum, caespitosum, caespitibus densis, viridibus. Caulis erectus, ad 3-4 cm altus, cum foliis ca. 13 mm crassus, rubiginosus, basi dense hyalino-radiculosus. Folia sicca flexuosa, humida e basi erecta patula, in plano late lanceolata, aristatula, ad 8 mm longa, basi late ovata, 1.5 mm, medio 0.61 mm lata, margine e medio ad apicem aculeato-serratis, dentibus acuminatis et crassis, usque unicellularibus; lamellis folii fere totam occupantis, valde densissimis et numerosis, ca. 43 seriatis, in sectione transversali altiora (62-71 μ), usque 5-6-cellulas constructis, cellulis quadratis, cellula apicali fere majore, incrassata et sublævi. Cellulis laminaribus bistratis, cellulis vaginalibus inferioribus elongate rectangulis 8-15 \times 56-86 μ , parietibus tenuis. Nervo valido, postice

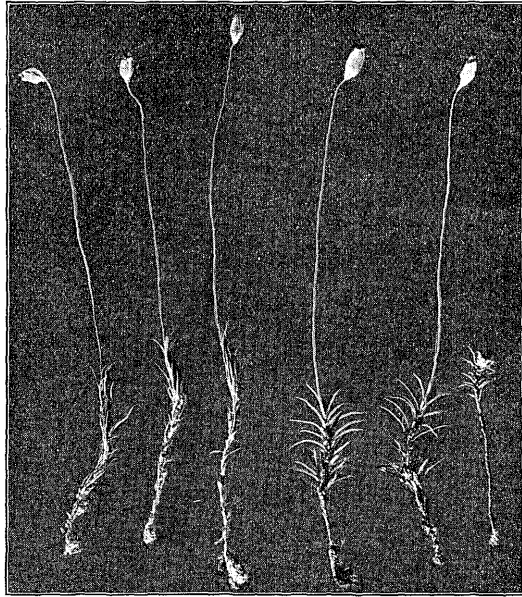


Fig. 17. *Polytrichum yezoense* HORIKAWA ($\times 1$)

valde convexo, antice leviter convexo, supra excedente. Seta ad 5 cm alta, rubro-pallida, fere stricta, lævis, sicca superne torta. Theca suberecta vel inclinatula, breviter quadrato-oblonga, ca. 5 mm longa, 2.5 mm lata, sicca sub

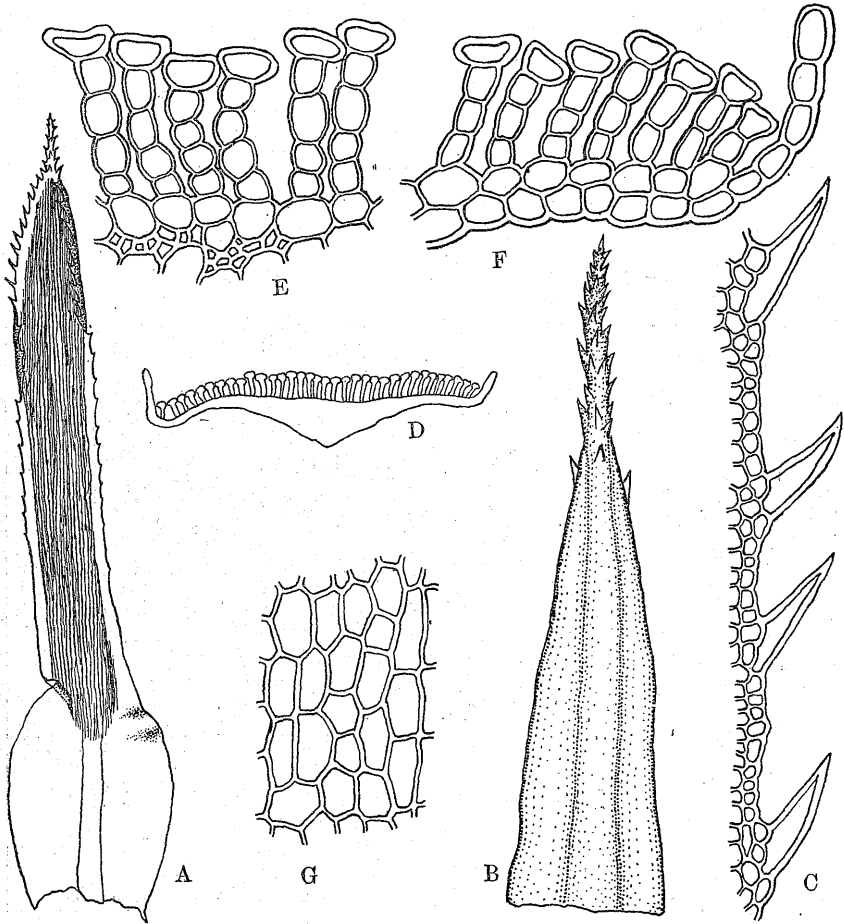


Fig. 18. *Polytrichum yezoense* HORIKAWA. A. Leaf, antical view, $\times 14$. B. Upper part of leaf, postical view, $\times 46$. C. Marginal part of leaf, $\times 160$. D. Cross-section of leaf, $\times 70$. E. Cross-section of lamellae, from middle portion, $\times 400$. F. Ditto, from marginal portion, $\times 400$. G. Capsule-wall, surface view, $\times 200$.

A. 葉、腹面觀 $\times 14$. B. 葉ノ上部、背面觀 $\times 46$. C. 葉ノ縁邊部 $\times 160$. D. 葉ノ横斷面 $\times 70$. E. 葉ノ中央部ノラメラノ横斷面 $\times 400$. F. 葉ノ縁邊部ノラメラ横斷面 $\times 400$. G. 蒴胞壁ノ表面觀 $\times 200$.

ore constricta, valde 4-plicatula, cellulis exothecii lævibus, rotundato-quadratis. Operculo basi late umbonato oblique rostrato.

Hab. On the mountain sandy soil.

Hokkaidô: Mt. Syaridake, prov. Kitami (M. KURITA, July 29, 1936-typus in Herb. Hiroshima Univ.).

67) 同節體ノ表裏兩面ニ鈎毛ヲ一面ニ密生スルコトニヨツテ他種カラ容易ニ區別ノ出來ルケフたまたごけ (*Metzgeria pubescens* RADDI) ガ滿洲ニモ亦産スルコトガ今度初メテ確實トナツタ。即チ吉林省ノ威虎嶺附近ノ密林下ノ岩上ニテ筆者自ラ採集シタ。

68) 同節體狀ノ植物體ハ甚ダ微小ニシテ蠕蟲狀ニ彎曲・分枝スルノデ有名ナ *Zoopsis* ハ本邦領域ニ於テハ 1931 年筆者ニヨリ沖繩島産ノ材料ニ基キみぢんごけ (*Zoopsis liukuensis* HORIKAWA) ト命名サレ、ソノ後臺灣ニモ産スルコトガ解ツタガ今回ハ植物區系地理學上、日本本部地域タル種子島ニモ分布スルコトヲ確メタ。即チ同島ノ古田官有林下ノ腐朽シカカッタ大木上ニ産スルヲ筆者自ラ澤山ニ採集シタ。今後屋久島・大隅半島ニモ發見サレルカモ知レナイ。

69) びらうどうろここげ (*Trichocolea tomentella* DUMORTIER) ハ本州ニ於テモ北方ニ行クニ從ヒテソノ量ヲ減ズル傾向ガアル。一昨年ノ夏札幌ニテ開カレタ日本植物學會ノ際筆者ハ石狩平原ノ有名ナル野幌國有林ニテ本種ヲ採集スルコトガ出來タ。本種ガ北海道ニ産スルコトノ初メテノ報告デアルト共ニ今日ノ知識デハコノ地ガ日本列島ニ於ケル北限地ニ當ルワケデアル。

70) ズット以前カラ八甲田山ノ亞高山帶ニテソノ地ノあをもりとどまつ・だけかんば等ノ樹皮上ニ *Pycnolejeunea* ニ屬スル一種ガ多産スルコトニ氣ガツイテキテ、標本ニモ作り記載モ圖モ作成シテ置イタ。一體 *Pycnolejeunea* 屬ノモノハ他ノくさりごけ科 (*Lejeuneaceae*) ノモノト等シク熱帶程ノ種類ニ富ムモノデ、北方ヤ高山ニハ全ク知ラレテヲナイ。コノ原則カラ見ルト本州ノ最北端ニ位置スル而モ八甲田山ノ亞高山帶ニソノ本據ヲ置ク種ト云フノハ一寸考ヘサセラル問題ナノデ發表ハ見合ハセ、他ノ各地方ヲ探查シテ飽クマデ慎重ヲ期シテキタガ、ソノ後引キ續イテ北ハ國境ニ近い樺太ノ保惠ニアル九大演習林カラ南ハ四國ノ石鎚山ノ亞高山帶ニ互リ連續シテ分布シテアルコトヲ確メタ。分類學上ハ飽クマデ立派ナ獨立種ト見做スベキモノデアルカラ愈々茲ニ *Pycnolejeunea subalpina* HORIKAWA ト命名シテ發表スル。即チ本種ハ今日デハ樺太・北海道・本州各部・四國ニ知ラル日本固有種デアルガ將來ハ沿海州ヤアムール地方ニモ分布スルコトガ解ルデアラウト思ハレル。

71) 本邦ニ於テハ *Encalypta* 屬中タダ一種知ラレテキルヤリかつぎ (*Encalypta ciliata* HOFFMAN) ガ今度初メテ北海道並ニ千島ニモ産スルコトガ明白トナツタ。北海道

デハタ張岳及ビ大雪山ノ亞高山帶ニテ採集シタガ、千島デハ色丹島ノ斜古丹部落ノ海濱ニ通ズル路傍ノ岩間ニ澤山生ヘテキルコトハ一般高等植物ノソレト軌ヲニスル。

72-73) 北半球ノ北部ノ濕地ニ群生スル美シクシテ柔カイ太紐狀ヲ呈スルおほひもごけ (*Aulacomnium palustre* LINNÆUS) 及ビふとひもごけ (*Aulacomnium turgidum* SCHWÆGRICHEN) ノ兩種ガ今度樺太ニテハ初メテ得ラレタ。前者ハ大泊ノ露助澤及ビ數香ノ保惠ニアル九大演習林ニテ、後者ハ保惠ノ九大演習林ニテ夫々 1931 年 7 月ニ筆者自ラ採集シタモノデアル。

74) 植物體ガ甚ダ長ク (5-15 cm)、葉ガ細長クシテ蒴柄ハ甚ダ短ク (3-5 mm) シテ蒴胞ハ殆ド苞葉ニ包マレタ様ナ恰好ヲ呈スルせいたかたまごけ背高玉蘚 (*Bartramia norvegica* LINDBERG) ガ臺灣ノ高地ニ産スル。即チ新高山及ビ次高山ノにひたかどまづ樹蔭下ニ群生スル (日本隱花植物圖鑑 p. 921 頁ニ產地ヲ臺灣ト記シタワケ)。本種ハ最初歐米ニ知ラレ、次イデコーカサス・ヒマラヤ・支那ノ南部ヘモ分布スルコトガ解ツテキタモノデアルカラ臺灣ニ産スルコトモ決シテ不思議デモ何デモナイ。

75) 莖ハ暗紫色、葉ハ暗綠色乃至褐綠色ヲ呈シテ強キ光澤ヲ帶ビテ美麗ナル樹枝狀蘚タルきだちはひごけ (*Hypnodendron formosicum* CARDOT) ハ 1906 年臺灣ノ深山ニ初メテ發見・發表サレタモノデ、ソノ後フィリピンニモ知ラレテ來タガ、今度ハ琉球ニモ産スルコトガ確メラレタ。即チ筆者ハ 1934 年 4 月 7 日ニ西表島ノ御座岳ニ自ラ採集シタ (日本隱花植物圖鑑 p. 925 ニ琉球ト記シタ所以)。

76) 恰モ駝鳥ノ羽ノ如キ感ジガアルノデだてうごけ (*Ptilium crista-castrense* DE NOTARIS) ト云フ名デ呼バレル本種ハ本邦デハ亞高山帶ニ最モ普通ニ見ラレルガ北海道ニ於テモ膽振支笏湖畔シシヤモナイ御料林・石狩タ張岳・石狩大雪山・北見斜里岳ニテ採集サレタ。分布上當然ノコトデハアルガ、之レガ本種ノ北海道ニ産スルコトノ最初ノ報知デアル。

77) 北海道ノ北見斜里岳産ノすぎごけ (*Polytrichum*) 屬ノ一種ニ外見ハうますぎごけ (*Polytrichum commune* LINNÆUS) ニ似テ甚ダ非ナルモノガアル。ヨク觀察スルト蒴胞ノ頸部ハアマリ縊レズ、蒴胞壁ニハ孔紋モナク明カニ *Polytrichia alpina* 節ニ屬スル。最モ近縁ノ種ヲ求ムレバ歐洲ノ一部ニ産スル *Polytrichum decipiens* LIMPRICHT デアルガ、ソレトハ葉ノラメラノ頂端細胞ガ肥厚シ、蒴蓋ガ蒴胞ニ比シテ甚ダ短イノデ容易ニ區別サレル。學名ヲ *Polytrichum yezoense* HORIKAWA トイフ。(續ク)